Work Order ID 102476

May-28-13 10:21:36 AM

102476

Item ID: D3065-5 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Step Leg

Start Date: 5/27/13 **Start Qty:** 80.00 *80*

Required Date: 5/27/13 **Req'd Qty:** 80.00 *80*

Reference:

Cust Item ID:

Customer:

Run Start *NR1*

Stop *NR2*

Approvals: **Process Plan:** MLJ **Date:** 13-05-28 **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D3065	Rev B								
100	FLOW WATER JET	0.00							
100						80	0	EL/JM 13-6-12	
Waterjet	**Memo**	0.00							
FLOW CNC Waterjet	1-Cut as per Dwg D if necessary Dwg Rev: B Prog Rev: B 2-Deburr								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110						80	0	EL/JM 13-6-12	
QC	**Memo**	0.00							
Quality Control									
120	QC8- Inspect parts - second check	0.00							DAS
120						(80)	13-06-13		09
QC	**Memo**	0.00							9-89
Quality Control									

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function
- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

Work Order ID 102476 *102476*

May-28-13 10:21:36 AM

Item ID: D3065-5 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Step Leg

Start Date: 5/27/13 **Start Qty:** 80.00 *80* **Cust Item ID:**

Required Date: 5/27/13 **Req'd Qty:** 80.00 *80* **Customer:**

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Stop** *NR2*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1	0.00				80	2	13 67	
	Memo	0.00							
140 *140* QC Quality Control	QC1- Inspect Part Finish	0.00				80			3/07/10
	Memo	0.00							
150 *150* Packaging Packaging	Identify as per dwg & Stock Location: 6-A	0.00				80			3/07/10
	Memo	0.00							

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

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- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
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- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

_____

_____

_____

Work Order ID 102476

102476

May-28-13 10:21:36 AM

Item ID: D3065-5 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Step Leg

Start Date: 5/27/13 **Start Qty:** 80.00 *80* **Cust Item ID:**

Required Date: 5/27/13 **Req'd Qty:** 80.00 *80* **Customer:**

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Stop** *NR2*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC21- Final Inspection - Work Order Release	0.00					13/7/11		
160									
QC	**Memo**	0.00							
Quality Control									

pl 13-07-10

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Crosstube ☐
- Water Jet ☐
- Engineering ☐
- Machining ☐
- Small Fab ☐
- Prod. Eng. Coor. ☐
- Quality ☐
- Thermoforming ☐
- Finishing ☐
- Rec/Store/Packaging ☐
- Other ☐
- Large Fab ☐
- Composite ☐
- Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

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- ☐ Folio/Program
- ☐ Grain
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- ☐ Instructions Incomplete/Unclear
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- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
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- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____

_____

_____

Picklist Print

May-28-13 10:21:35 AM

Work Order ID: 102476

Parent Item: D3065-5

Parent Item Name: Step Leg

Start Date: 5/27/13 **Required Date:** 5/27/13

Start Qty: 80.00 **Required Qty:** 80.00

Comments: IPP: C02.11.01Incorporated D3066-1 IPPKJ/RF
IPP Rev:D Now on Water Jet 06-04-11 JLM
IPP Rev:E Now manufactured with 6061-T6 06-05-25 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.080 6061-T6 .080 Sheet		Purchased	No			100	sf	0.0000	**0.825**	~~60.473688~~			

JM 3-6-12

B# 125812 Qty. 64 S.F. (nested)

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐ ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
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☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
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☐ Part Incorrect
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☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

_____
_____
_____

DART AEROSPACE LTD	Work Order:	102476
Description: Step Leg	Part Number:	D3065-5
Inspection Dwg: D3065 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

[X] First Article [ ] Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
16.458	+/-0.010	16.458"	–		T	JKM06
15.750	+/-0.005	15.750"	–		T	
2.250	+/-0.005	2.249"	–		V	JKM01
3.460	+/-0.005	3.458"	–		V	
0.865	+/-0.005	0.864"	–		V	
6.020	+/-0.005	6.018"	–		V	
1.205	+/-0.005	1.202"	–		V	
3.484	+/-0.005	3.484"	–		V	
0.871	+/-0.005	0.870"	–		V	
8.325	+/-0.010	8.331"	–		V	Prod#102
0.551	+/-0.010	0.554"	–		V	
0.213	+0.005/-0.000	0.216"	–		V	
Ø0.128	+0.005/-0.000	0.129"	–		V	

Measured by:	JM
Date:	13-6-12

Audited by:	DAS 09
Date:	13-06-13

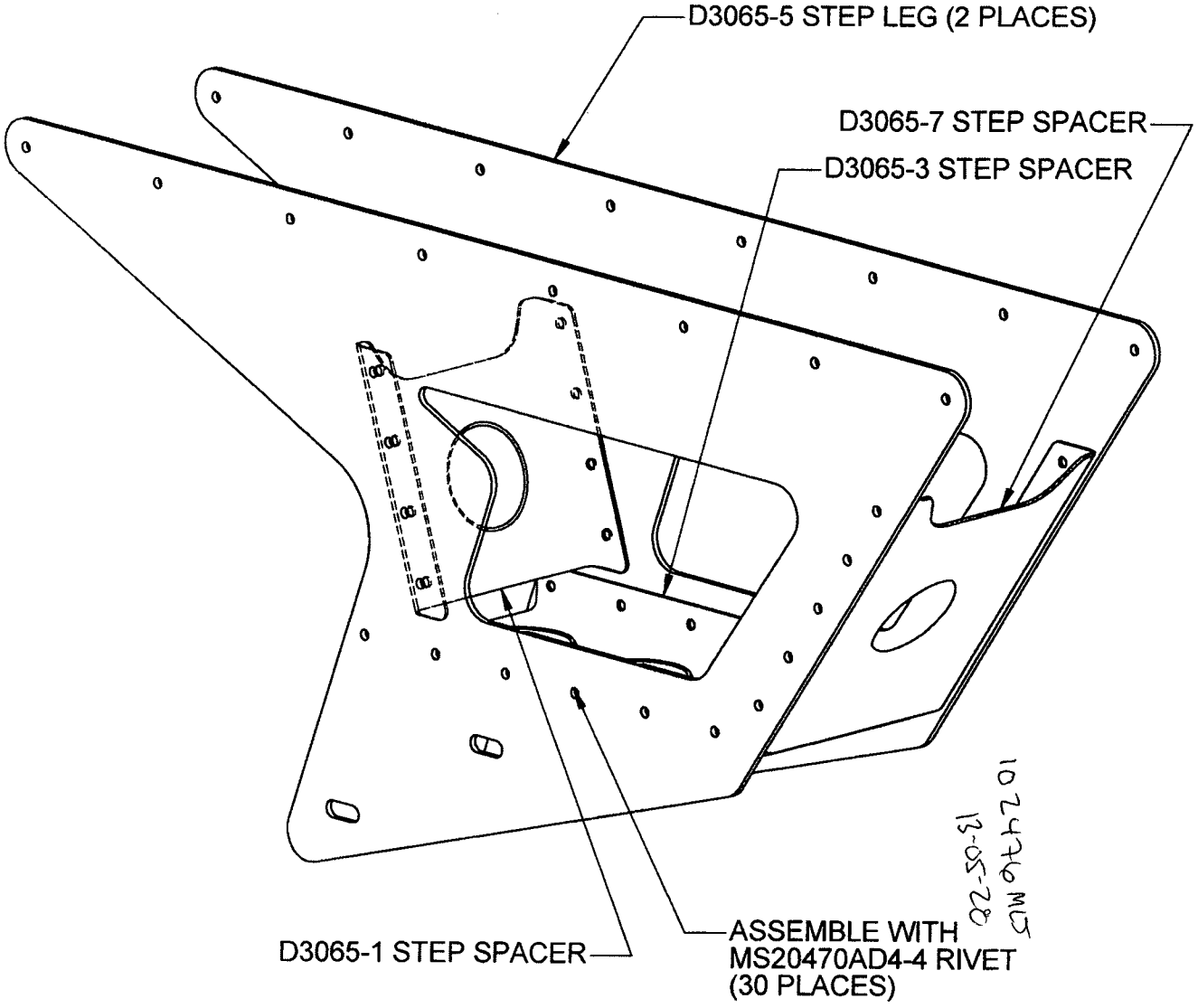
Prototype Approval:	N/A
Date:	N/A

Rev	Date	Change	Revised by	Approved
A	03.09.22	New Issue P/O D3065-041	KJ/RF	
B	04.06.15	Added Ø0.128 dimension	KJ/JLM	
C	06.06.23	Dwg Rev. changed	KJ/JLM	

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED PH	APPROVED	DRAWING NO. D3065	REV. B SHEET 1 OF 5
DATE 06.05.23		TITLE STEP LEG ASSEMBLY	SCALE 1:2

A	02.09.11	NEW ISSUE
B	06.05.23	ADD 6061-T6 MATERIAL, ADD SLOTS TO D3065-5

RELEASED
06 06 20



D3065-041 STEP LEG ASSEMBLY

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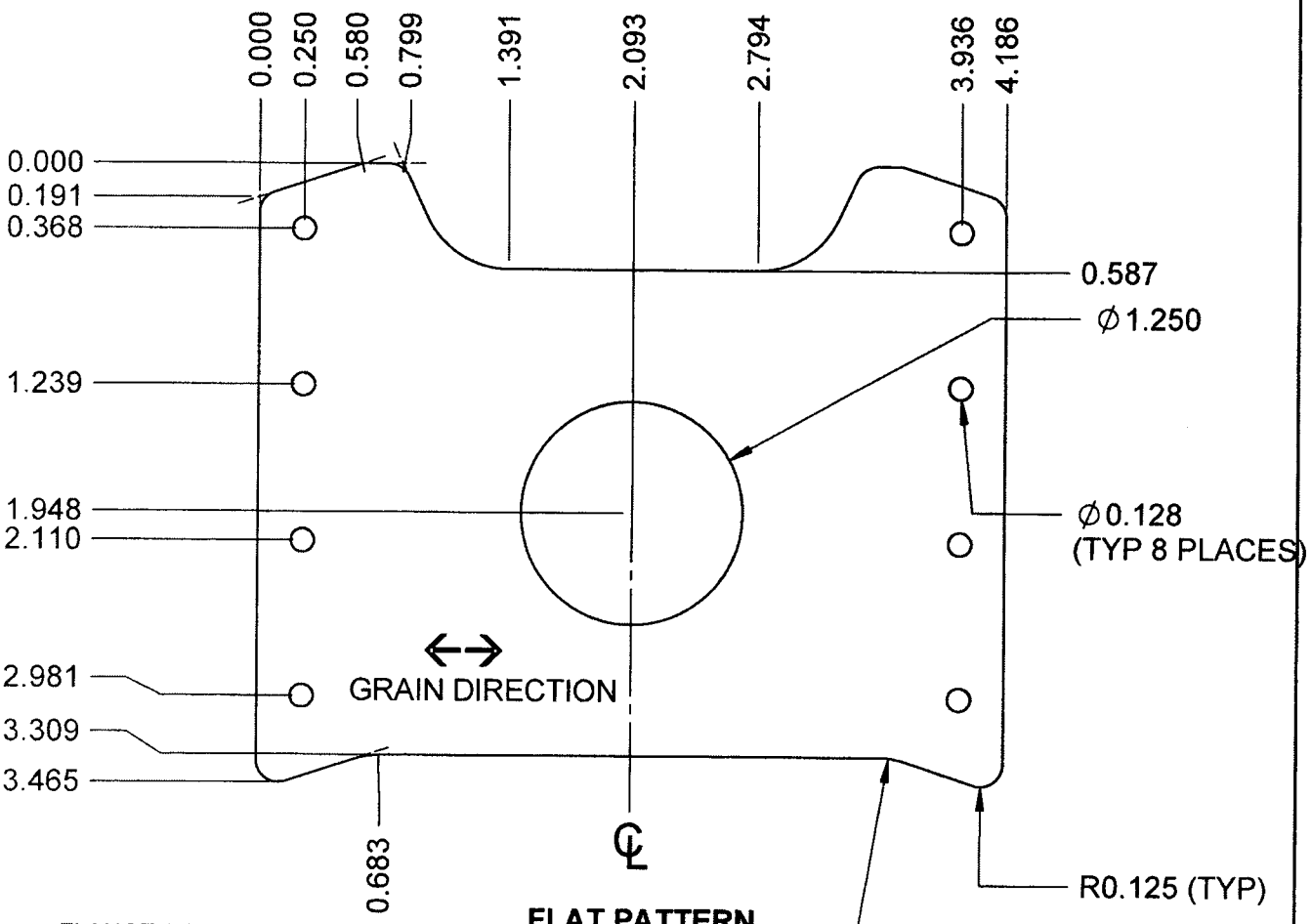
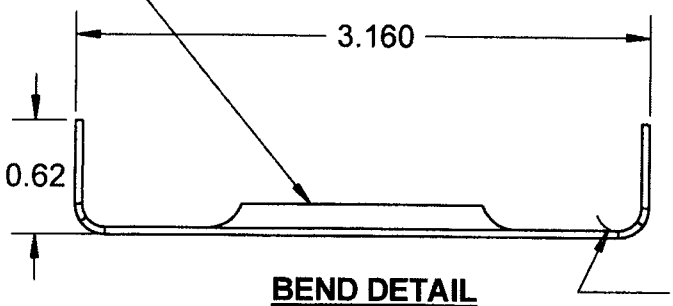
CHECKED PH	APPROVED	DRAWING NO. D3065	REV. B SHEET 2 OF 5
DATE 06.05.23		TITLE STEP LEG ASSEMBLY	SCALE 1:1



FLAT PATTERN

FLANGE AFTER BENDING TOWARDS SIDE SHOWN USING DT8174 (2 PLACES)



BEND DETAIL

RELEASED
06 06 20

D3065-1 STEP SPACER

1) MATERIAL: 2024-T3 (QQ-A-250/4) 0.040 THICK (REF DART SPEC. M2024T3S.040)
2) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1
3) BREAK ALL SHARP EDGES 0.005 TO 0.010
4) PART IS SYMMETRIC ABOUT CENTERLINE
5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
6) ALL DIMENSIONS ARE IN INCHES

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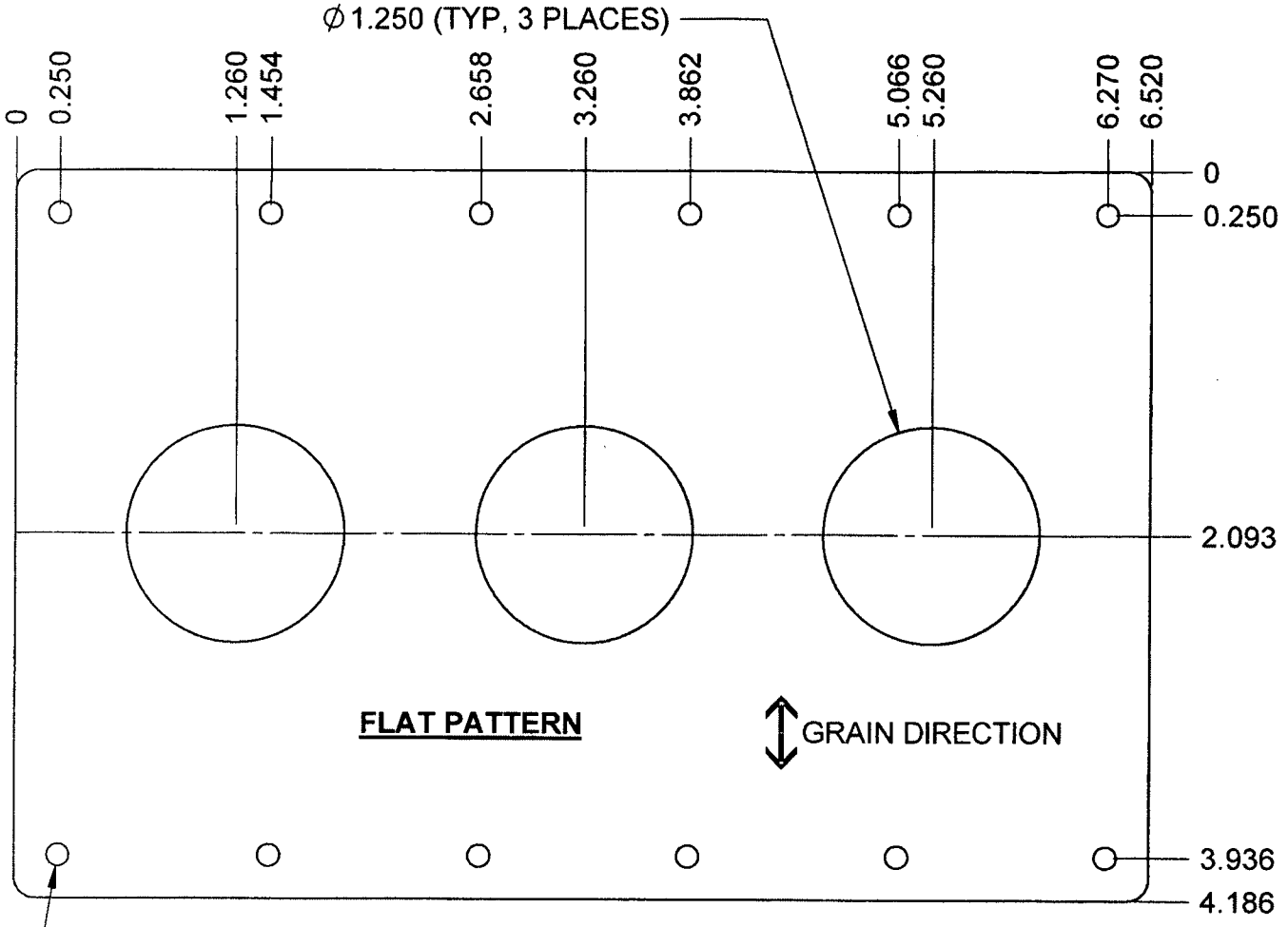
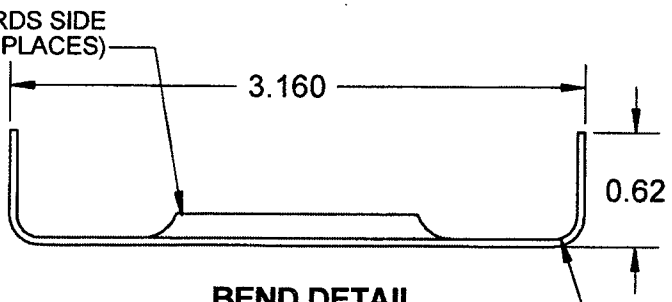
9th 201

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED PH	APPROVED	DRAWING NO. D3065	REV. B SHEET 3 OF 5
DATE 06.05.23		TITLE STEP LEG ASSEMBLY	SCALE 1:1



RELEASED
06 06 20



BEND DETAIL

D3065-3 STEP SPACER

1) MATERIAL: 2024-T3 (QQ-A-250/4)
   0.040 THICK (REF DART SPEC. M2024T3S.040)
2) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1
3) PART IS SYMMETRIC ABOUT CENTERLINE
4) BREAK ALL SHARP EDGES 0.005 TO 0.010
5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
6) ALL DIMENSIONS ARE IN INCHES

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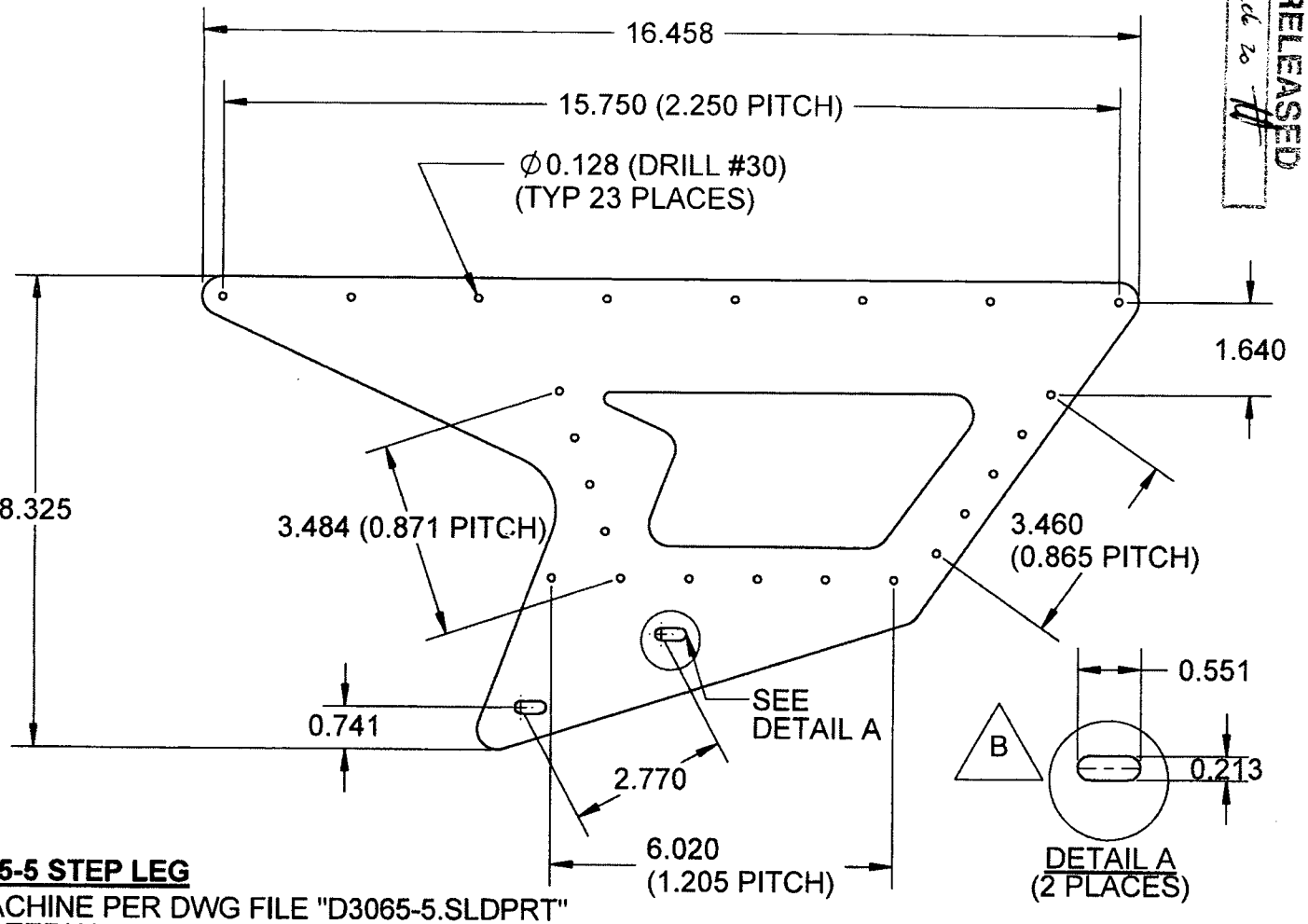
94201

102476



D3065-5 STEP LEG

1) MACHINE PER DWG FILE "D3065-5.SLDPRT"
2) MATERIAL: 6061-T6 (PER QQ-A-250/11 OR AMS 4025 OR AMS 4027) 0.080" THICK
   (REF DART SPEC M6061T6S.080)
   OR
   5052-H32 (PER QQ-A-250/8 OR AMS 4016) 0.080 THICK (REF DART SPEC. M5052H32S.080)
3) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1
4) BREAK ALL SHARP EDGES 0.005 TO 0.010
5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
6) ALL DIMENSIONS ARE IN INCHES

DESIGN GP	DRAWN BY C.B	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED PH	APPROVED	DRAWING NO. D3065	REV. B
DATE 06.05.23		TITLE STEP LEG ASSEMBLY	SCALE 1:3
			SHEET 4 OF 5

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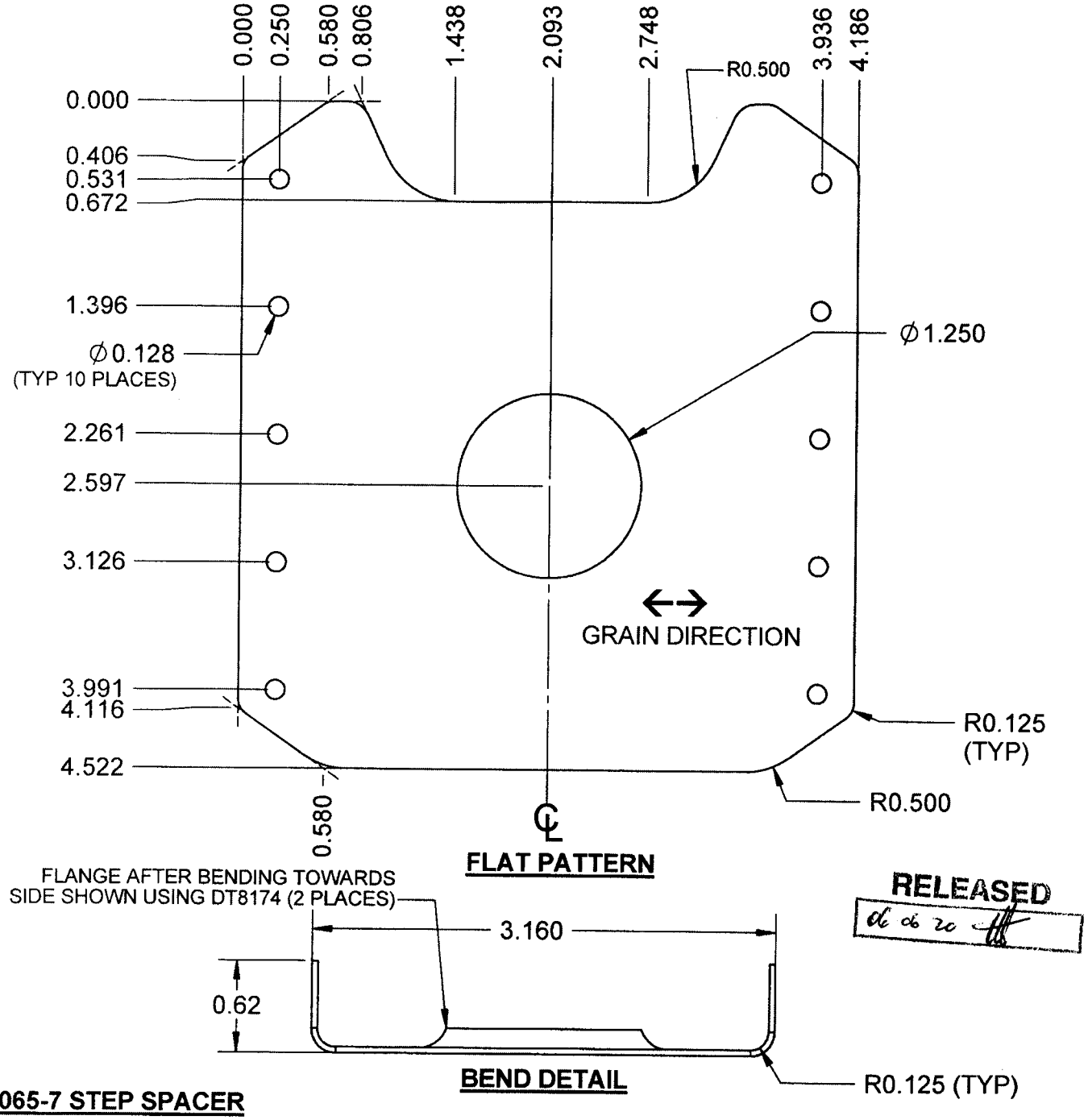
DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED PH	APPROVED	DRAWING NO. D3065	REV. B SHEET 5 OF 5
DATE 06.05.23		TITLE STEP LEG ASSEMBLY	SCALE 1:1



RELEASED
dt 06 20

D3065-7 STEP SPACER

1) MATERIAL: 2024-T3 (PER QQ-A-250/4) 0.040 THICK (REF DART SPEC. M2024T3S.040)
2) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1
3) PART IS SYMMETRIC ABOUT CENTERLINE
4) BREAK ALL SHARP EDGES 0.005 TO 0.010
5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
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